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ABSTRACT

This study examined the links between Australian adolescents' achievement goal orientation and the information sources they used when making decisions about returning to school and selecting courses for the elective final 2 years of high school. A total of 230 year-11 students from 2 coeducational comprehensive schools in a large city participated. The sample of 16-year-olds was predominantly Anglo-Australian. In addition to providing demographic information and indicating current subject choices, students were asked to rate themselves on 25 items assessing aspects of motivational goals in a questionnaire. The findings indicated that the most prominent student goals were task goals, closely followed by prosocial or friendship goals, and, finally, work avoidance goals. Analyses using factor scores as the dependent variable showed that there was a clear relationship between goal orientation and both the information sought about subject choice and the sources of information taken into account. Students who sought advice from teachers were more likely to be high on the learning scale than those who did not, while students who consulted friends about the decision to return to school were higher on the friendship scale. Students who reported that they took no one's advice about returning to school were higher on the work avoidance factor, while students who considered their parents' advice were higher on the friendship factor. Students who consulted no one about subject selection were likely to be lower on the learning subscale or higher on the work avoidance scale than students who consulted information sources. Findings suggest that the influence of goal orientation extends far beyond classroom behavior into the ways in which students decide about their academic and vocational futures. (KDFB)

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# Motivational goals, information sources and subject choice in adolescence

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**Abstract**

It has long been recognised that different achievement goals elicit different motivational patterns with different behavioral consequences. These goals may vary from task mastery goals to performance or social goals. This Australian study investigates the links between adolescents' achievement goal orientations and the information sources they use when making decisions about returning to school and choosing subjects for the final two years of high school.

In total, 230 year 11 students (120 females and 110 females) from two coeducational comprehensive schools in a large Australian city participated. Students completed a questionnaire on subject choice and information as well as a Personal Motivational Goals Scale.

Overall, the most prominent goals in year 11 students were task goals, closely followed by prosocial or friendship goals and, finally, work avoidance goals. Analyses using factor scores as a dependent variable showed that there was a clear relationship between goal orientations and information sought about subject choice, and the sources of information taken into account in the decision making. Such findings have implications for the ways in which adolescents make subject and career decisions and demonstrates that the influence of goal orientation extends far beyond classroom behavior into the ways in which students decide about their academic and vocational futures.

Within the NSW (Australian) school system, the end of compulsory schooling is year 10. At this juncture, students must decide whether to continue within the school system (the retention rate is approximately 70%) and if so, to decide on their focus of study. In 1995 in NSW there were 81 subjects available for public examination at the end of grade 12, including vocational subjects such as Accounting, Electronics and Hospitality. Although there are some restrictions on subject choice (eg English must be studied) as well as a general requirement to choose at least one subject from each of two broad groupings (Maths/Science and Humanities/Languages) students have a wide range of options and subject choices for the final two years of high school. Although schools present their students with subject information, students are free to obtain further information from a variety of sources and, indeed, to obtain information about offerings at other schools. This paper investigates the links between adolescents' achievement goal orientations and the information sources they use when choosing subjects for the final two years of high school

It has long been recognised that different goals elicit different motivational patterns with different behavioral consequences. Most research (eg Ames, 1992; Nicholls, 1989) distinguishes between learning or task mastery goals and performance or ego-involvement goals. While task goals are linked to beliefs that effort and outcome covary " I feel most successful if I solve a tricky problem by working hard", performance goals may encompass a variety of beliefs that depend on others for their validations, for example ego goals such as "I feel successful if I show people I'm good at something".

Considerable research has looked at the relationship between goal orientations and academic behaviour and outcomes, arguing that task goals are optimal for achievement (eg. Greene & Miller, 1996). The influence of different types of motivational orientations may, however, go beyond the direct school tasks to more indirect aspects of schooling such as subject choice. Students must balance their choice between subjects they are interested in ( a task orientation) but may not necessarily need for future vocations and subjects at which they feel they may excel and so choose for performance reasons. In addition, within the social context of the school, it is likely that adolescents take into consideration the choices and intentions of their friends and fellow students. Of particular relevance here is Wentzel's (1989) argument that within a classroom setting multiple goals, both social goals "I feel successful if I am with my friends" and academic goals may be related to achievement. Rather than focussing on actual subject choices (an issue of local relevance

only) this paper addresses the processes leading to subject choice, namely the information seeking behaviour. It is hypothesised that adolescents who differ on their goal orientations will display different patterns of information seeking and usage with two related decisions - the decision to leave school or continue schooling after the post compulsory years and the choice of subjects.

**Method.**

Sample

In total, 230 grade 11 students (110 males and 120 females) from two coeducational comprehensive government schools in a large Australian city participated. This comprised the entire grade 11 cohort from the schools involved which were both situated in mid socio-economic outer metropolitan suburbs. The sample of 16 year-olds was predominantly Anglo-Australian, although 16.5% were born outside Australia (approximately half in Asian countries, half in European countries).

Procedure

Students completed a questionnaire which was in several sections. Basic demographic information was collected as well as information about current subject choices and changes that had been made. These data, primarily of local interest, are not reported here. Students were also asked about the information they were given, and the sources they consulted and took notice of which were relevant at two decision points: the decision to return to school and decision about subject choice. They were asked to indicate whether or not they sought advice from, or took notice of the following information sources: No one, parents, teachers, careers adviser, friends (for returning to school) or no one, parents, teachers, careers adviser, siblings, students in other grades (for subject choice). Finally, students were asked to rate themselves (from 1= strongly disagree to 5 = strongly agree) on 25 items assessing aspects of motivational goals. These items, originally used by Beltman (1994) were based in part on the Motivational Orientation Scale (Nicholls et al, 1989) for the task, ego and work avoidance subscales and on the work of Wentzel (1989) for the prosocial and social responsibility subscales. As will be outlined in the results section, only four subscales and 19 items were used in the final analyses. The entire questionnaire was completed in class groups with a research assistant available to answer any questions and took no more than 30 minutes to complete.

**Results**

Although the complete sample size was 230, missing data meant that certain analyses were completed on slightly smaller groups (215 was the minimum sample size).

Preliminary Scale analysis.

The initial analysis examined the scale structure and internal reliabilities of the five subscales. Although four of the subscales demonstrated satisfactory reliabilities (Cronbach $\alpha$ reliability coefficients from .74 to .82) the last subscale (social responsibility) was considerably less reliable ($\alpha$ =.59). Moreover, certain items, most notably the task item 'I feel busy', the ego item 'show people I'm good at something' and the work avoidance item 'I score high on a test without studying' appeared problematic in that their omission increased the scales' reliabilities. A preliminary factor analysis confirmed that these items were not contributing to the relevant scales and that indeed, the so-called work avoidance item loaded most strongly with the ego items. In addition, one item from the social responsibility scale 'I hand in my work on time' behaved in a similar manner to the item 'I work hard on a difficult task' from the task scale. As a consequence these items were moved to the more appropriate subscales and the social responsibility scale omitted, leaving a final measure comprising 19 items on four subscales, with reliabilities from .77 to .85. Table 1 provides the summary data for the final scales.

Table 1

Sample items, reliabilities, means and number of items for the motivation subscales

| Scale and sample items | Reliability | Scale Mean | No. of Items |
|---|---|---|---|
| *I feel most successful if:* | | | |
| Task Orientation | .77 | 4.02 | 5 |
| 1. I learn something interesting | | | |
| 2. I finally understand a really complicated idea | | | |
| Ego Orientation | .85 | 3.77 | 5 |
| 1. I do the work better than other students | | | |
| 2. I am the only one who can answer the teacher's questions | | | |
| Work Avoidance | .78 | 2.49 | 4 |
| 1. I do almost no work and get away with it | | | |
| 2. I don't have to work too hard | | | |
| Prosocial Orientation | .80 | 3.96 | 5 |
| 1. I am with my friends | | | |
| 2. my friends invite me out | | | |

Overall, the most prominent goals in grade 11 students were task, followed closely by prosocial goals. Little emphasis was given to work avoidance goals. In order to determine the relationship between these goals and also investigate a possible link between motivational goals and information seeking behaviour with regard to subject choice, a factor analysis on the set of 19 items was completed. The varimax solution, explaining 47.9% of the variance produced three factors: combined task/ego, work avoidance (with several task items also loading negatively on this factor) and a prosocial factor. Table 2 displays the items and all loadings above 0.3.

Table 2

Factor analysis of Personal Goals scale (Varimax rotation)

| *At school I feel most successful if:* | Task/Ego | WA | Prosocial |
|---|---|---|---|
| I work hard on a difficult task | .34 | -.38 | |
| I hand in my work on time | .44 | -.34 | |
| I learn something interesting | .49 | | |
| I can see I'm getting better at my work | .72 | | |
| I finally understand a really complicated idea | .71 | | |
| I do the work better than other students | .77 | | |
| I am the only one who can answer the teacher's questions | .69 | | |
| I get one of the highest marks in the class | .74 | | |
| I could do something that the other students couldn't do | .69 | | |
| I score high on a test without studying | .71 | | |
| I do almost no work and get away with it | | .79 | |
| I fool around and get away with it | | .69 | |
| I don't have to work too hard | | .66 | |
| the teacher doesn't ask any hard questions | | .56 | |
| I am with my friends | | | .58 |
| my friends invite me out | | | .68 |
| I make new friends | | | .55 |
| I have fun with my friends | | | .73 |
| my friendships are going well | | | .79 |
| eigenvalue | 4.31 | 2.62 | 2.16 |
| % variance | 22.7 | 13.8 | 11.4 |

This structure differed in some significant ways from previous research. Nicholls (1989) for instance reported that the Task and Ego orientations were only slightly related (.17 to .29) in high school samples although he did report a negative relationship between the Work Avoidance and Task Orientations (from -.26 to -.47). In the present study the scales as listed above were essentially uncorrelated (largest correlation of .02). Because the factor structure appeared so clear, factors scores rather than subscale means were used in the subsequent analyses. The scales are referred to as Learning, Work Avoidance, and Friends

Relationship between motivational goals and information seeking

A series of MANOVAs was conducted, using the questions about information as grouping variables (all were categorical: eg, source consulted or not) and the three factor scores as dependent variables.

A clear pattern of results emerged in relation to both the decision to return to school and the selection of subjects, with different patterns of information being related to different factor scores.

a) Return to school. There were significant differences between groups in the extent to which teachers ($F(3,211) = 5.53$, $p < .01$) and friends ($F(3,211) = 3.21$; $p < .05$) were consulted. Univariate tests indicated that students who were sought advice from teachers were more likely to be high on the learning scale than those who did not, while those who consulted friends about the decision to return to school were higher on the friendship scale.

In terms of the advice taken about this decision, similar differences were found. Students who took notice of the advice given by friends were more likely to be higher on the friendship factor ($F(3,211) = 6.81$, $p < .001$). Two other results approached significance ($p < .1$) on the multivariate statistic, with a significant univariate result: students who reported they took no one's advice were higher on the work avoidance factor while students who took notice of their parents' advice were higher on the friendship factor.

b) Subject choice. There were significant differences between the groups of students who consulted no one, parents, teachers and careers advisers. Students who consulted no one about subject selection were likely to be lower on the learning subscale or higher on the work avoidance scale ($F(3,219) = 5.94$, $p < .01$) than students who consulted information sources. Those who sought advice from parents were more likely to be higher

on the learning or friendship subscales than those who did not ($F$ (3,219) = 3.75, $p$ < .02) while those who consulted teachers ($F$(3,219) = 6.04 $p$ <.001) were higher on the learning scale or lower on the work avoidance scale than those who did not. In addition, students low on the work avoidance scale were less likely to consult careers advisers ($F$ (3,219) = 4.30, $p$ <.01).

In terms of advice taken, a similar pattern prevailed. Scores on the work avoidance scale distinguished between those students who took notice of no one ($F$(3,219) = 3.49, $p$ < .02) and those who heeded various sources, and those who took notice of teachers and careers advisers from those who did not [$F$(3,219) = 7.60, $p$ < .001) for teachers; $F$ (3,219) = 3.46, $p$ < .02 for careers advisers]. In addition, those who took heed of teachers' advice were more likely to be higher on the learning subscale than those who did not.

**Discussion**

There are two issues of interest: first, the factor structure uncovered in this study and second, the relationships found between factor scores and information seeking and usage.

There is a ready explanation for the different factor structure uncovered in this study and in particular for the lack of discrimination between Task and Ego orientations. Nicholls (1989) has argued that ego and task involvement represent more or less differentiated notions of ability. For students in the final years of high school, the demands of the education system are likely to make certain motivational orientations more or less salient. In the Australian system described in this sample, students are working towards a formal examination (the Higher School Certificate) which serves as both an accreditation and tertiary entrance qualification. Indeed, one of the most commonly cited outcome measures is a Tertiary Entrance Rank. As many motivational theorists have argued (eg Ames, 1992) such an emphasis in the classroom or elsewhere on comparison measures and normative performance is likely to elicit a motivational pattern consistent with performance goals and ego involvement. Nevertheless, to achieve highly, students must be interested in the subjects they select and expend a great deal of effort, both of which contribute to task involvement. As a consequence, task and ego orientations are closely linked. In the present study, items which load on the first factor from both the task and performance subscales are those items which reflect practices which lead to comparative success in schooling and so are not differentiated.

At an individual level, there was a clear relationship between the predominant goal orientation as measured by the factor scores and the sources of information taken into account in the decision making, about both returning to school and subject choice. Such a finding demonstrates that the influence of goal orientation extends far beyond achievement behavior into the ways in which students decide about their academic and vocational futures. The work avoidance factor seems particularly important in this regard. Students, for instance, who took no one's advice either about the decision to return to school or about the subjects they chose were likely to be high on the work avoidance scale. Such students do little to seek the assistance and guidance which may help them to find some course of study which interests them. In contrast, those who were low on the work avoidance scale were more likely to seek subject advice from educational experts - teachers and careers advisers.

Other goal orientations also seem related to the type of advice which is sought and taken and this advice may not always be optimal for decision making. Whereas students who were high on the learning factor were more likely to seek advice from relevant sources (teachers, careers advisers), students high on the friendship factor were likely to consult and take heed of friends, fellow students and parents. While these sources may give affective support, there is no guarantee that the most appropriate educational and vocational advice will be given.

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